Advances in Genetic Programming, Volume 2. Edited by Peter Angeline and Kenneth Kinnear, Jr. MIT Press, Cambridge, MA. (1996). 538 pages. $50.00.

Contents:

Contributors. Preface. Acknowledgments. 1. Genetic programming's continued evolution (Peter J. Angeline). I. Variations on the genetic programming theme. 2. A comparative analysis of genetic programming (Una-May O'Reilly and Franz Oppacher). 3. Evolving programmers: The co-evolution of intelligent recombination operators (Astro Teller). 4. Extending genetic programming with recombinative guidance (Hitoshi Iba and Hugo de Garis). 5. Two self-adaptive crossover operators for genetic programming (Peter J. Angeline). 6. Explicitly defined introns and destructive crossover in genetic programming (Peter Nordin, Frank Francone and Wolfgang Banzhaf). II. Modular, recursive, and pruning genetic programs. 7. Simultaneous evolution of programs and their control structures (Lee Spector). 8. Classifying protein segments as transmembrane domains using architecture-altering operations in genetic programming (John R. Koza and David Andre). 9. Discovery of subroutines in genetic programming (Justinian P. Rosca and Dana H. Ballard). 10. Evolving recursive programs for tree search (Scott Brave). 11. Evolving recursive functions for the even-parity problem using genetic programming (Man Leung Wong and Kwong Sak Leung). 12. Adaptive fitness functions for dynamic growing/pruning of program trees (Byoung-Tak Zhang and Heinz Mühlenbein). III. Analysis and implementation issues in genetic programming. 13. Efficiently representing populations in genetic programming (Maarten Keijzer). 14. Genetically optimizing the speed of programs evolved to play Tetris (Eric V. Siegel and Alexander D. Chaffee). 15. The royal tree problem, a benchmark for single and multiple population genetic programming (William F. Punch, Douglas Zongker and Erik D. Goodman). 16. Parallel genetic programming: A scalable implementation using the transputer network architecture (David Andre and John R. Koza). 17. Massively parallel genetic programming (Hugues Juillé and Jordan B. Pollack). 18. Type inheritance in strongly typed genetic programming (Thomas D. Haynes, Dale A. Schoenefeld and Roger L. Wainwright). 19. On using syntactic constraints with genetic programming (Frédéric Gruau). 20. Data structures and genetic programming (William B. Langdon). IV. New environments for genetic programming. 21. Algorithm discovery using the genetic programming paradigm: Extracting low-contrast curvilinear features from SAR images of arctic ice (Jason M. Daida, Jonathan D. Hommes, Tommaso F. Bersano-Begey, Steven J. Ross and John F. Vesecky). 22. Genetic programming learning and the cobweb model (Shu-Heng Chen and Chia-Hsuan yeh). 23. Evolutionary identification of macro-mechanical models (Marc Schoenauer, Michèle Sebag, François Jouve, Bertrand Lamy and Habibou Maitournam). 24. Discovering time oriented abstractions in historical data to optimize decision tree classification (Brij Masand and Gregory Piàtetsky-Shapiro). Appendices. A. Genetic programming resources on the World-Wide Web (Patrick Tufts). B. A bibliography for genetic programming (William B. Langdon). Index.

Computational Economics and Finance: Modeling and Analysis with Mathematica®. Edited by Hal R. Varian. Springer-Verlag, New York. (1996). 468 pages. DM 88.00, öS 642.40, sFr 77.50 (diskette included).

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Preface. Contributors. Economics. 1. Linear programming with *Mathematica*: The simplex algorithm (Michael Carter). 2. Linear programming with *Mathematica*: Sensitivity analysis (Michael Carter). 3. Optimization with *Mathematica* (J.-C. Culioli). 4. Optimizing with piecewise smooth functions (Paul A. Rubin). 5. Data screening and data envelopment analysis (Eduardo Ley). 6. Efficiency in production and consumption (Hal R. Varian). 7. Cost allocation (William W. Sharkey). 8. Simulating the effects of mergers among noncooperative oligopolists (Luke M. Froeb and Gregory J. Werden). Finance. 9. Auctions (John Dickhaut, Steve Gjerstad and Arijit Mukherji). 10. Yield management (Ward Hanson). 11. Implementing numerical option pricing models (Simon Benninga, Raz Steinmetz and John Stroughair). 12. YieldCurve (Mark Fisher and David Zervos). Statistics. 13. Log spectral analysis: Variance components of asset prices (Luke M. Froeh). 14. Data analysis using *Mathematica* (Robert A. Stine). 15. Doing Monte Carlo studies with *Mathematica* (David A. Belsley). 16. Random[title]: Manipulating probability density functions (Colin Rose and Murray D. Smith).

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Contents:

Preface. 1. Introduction: A role for history. 2. The route to normal science. 3. The nature of normal science. 4. Normal science as puzzle-solving. 5. The priority of paradigms. 6. Anomaly and the emergence of scientific discoveries. 7. Crisis and the emergence of scientific theories. 8. The response to crisis. 9. The nature and necessity of scientific revolutions. 10. Revolutions as changes of world view. 11. The invisibility of revolutions. 12. The resolutions of revolutions. 13. Progress through revolutions. Postscript—1969. Index.

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Contents:

Preface. 1. Introduction to regular expressions. 2. Extended introductory examples. 3. Overview of regular expression features and flavors. 4. The mechanics of expression processing. 5. Crafting a regular expression. 6. Tool-specific information. 7. Perl regular expressions. Appendices. A. Online information. B. Email Regex program.